## Everspin Announces nvNITRO NVMe Storage Accelerator Family

Everspin unveils a new low latency, PCIe NVMe card based on Spin Torque MRAM

Chandler, AZ, March 8, 2017 — Everspin Technologies, Inc., the leading provider of MRAM solutions, today announced its nvNITRO line of storage accelerators which delivers extremely fast read and write times with ultra-low latency. Everspin is introducing initial capacities of 1 Gigabyte and 2 Gigabyte of Spin Torque MRAM today, based on its 256Mb DDR3 ST-MRAM. Capacities from 4 Gigabyte up to 16 Gigabytes will be available later in this year utilizing Everspin's 1 Gigabit DDR4 ST-MRAM. The nvNITRO ES1GB and ES2GB operate at a blazing 1,500,000 IOPS with 6 microsecond end-to-end latency. They are offered in a half-height, half-length (HHHL) PCIe card with two access modes: NVMe SSD and memory mapped IO (MMIO). Enterprise storage system designers now have the benefit of memory speed in a storage form factor and protocol. The use of Everspin's ST-MRAM means that the data is persistent and power fail safe without the need for Supercapacitors or battery backup, saving critical space in storage racks. The high cycle endurance of ST-MRAM also enables unlimited uniform drive writes per day, eliminating the need for complex wear leveling algorithms used in NAND Flash based drives. There is no degradation in read/write performance over time with Everspin's ST-MRAM.

This extreme performance, combined with ultra-low and consistent latency, means that demanding applications such as high frequency financial trading systems will be able to count on faster, more predictable transactions. The read/write speed and low latency have value in many storage applications such as database and file system acceleration, on-line transaction processing log caches, and metadata caching/buffering. The need for faster speed across storage networks and within data centers can now be met with the industry's first all MRAM storage cards that provide both block access storage and byte addressable memory functions on the same platform. The PCIe Gen 3, NVMe interface makes it simple to add this capability to existing storage networks and servers because there is no need for special drivers or operating system changes.

The nvNITRO product is under test at customers now. Initial production is planned for the second quarter of 2017. Everspin will be expanding the nvNITRO line with M.2 and U.2 form factors with capacity options ranging from 512MB to 8GB throughout the year.

## **About Everspin Technologies**

Everspin Technologies is the leading provider of MRAM solutions. Everspin's MRAM solutions offer the persistence of non-volatile memory with the speed and endurance of random access memory (RAM), and enable the protection of mission critical data particularly in the event of power interruption or failure. Everspin's MRAM solutions allow its customers in the industrial, automotive and transportation, and enterprise storage markets to design high performance, power efficient and reliable systems without the need for bulky batteries or capacitors. Everspin is the only provider of commercially

available MRAM solutions and over the past eight years has shipped over 60 million MRAM units. For more information, visit <a href="https://www.everspin.com">www.everspin.com</a>.

## **Cautionary Statement Regarding Forward-Looking Statements**

The statements in this press release regarding the development of future products and Everspin's ST-MRAM solutions are forward-looking statements that are subject to risks and uncertainties. Risks that could cause these forward-looking statements not to come true include, but are not limited to: the risk that unexpected technical difficulties may develop in the final stages of development or production

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